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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,225	11/20/2001	Tony F. Rodriguez	P0490	4167

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EXAMINER
O STEEN, DAVID R

ART UNIT	PAPER NUMBER
2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/002,225	RODRIGUEZ, TONY F.
	Examiner	Art Unit	
	David R. O'Steen	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 April 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>6,7,9 and 12-27</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>6, 7, 9 and 12-27</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date <u>1-11-2007</u>.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 4,

2007 has been entered.

Response to Arguments

2.   Applicant's arguments filed April 11, 2007 have been fully considered but they

are not persuasive.   On pages 7 and 8 of the Remarks section, the applicant disputes

the examiner's reason for combining Chen with Steinhorn. The applicant argues that

since there is no deficiencies in either Chen or Steinhorn that the examiner uses

hindsight to make the combination. The examiner disagrees. In a communications

system, it is essential that all participating systems can share information with each and

use the same formats. It is disadvantageous if a system is developed using a

communications format that is not widely adopted. For these reasons, Chen's system is

built upon existing or upcoming communications formats such as NTSC and PAL. But

Chen is not limited to these broadcast systems and states that his enhanced broadcast

communication can be used with "any future format that may be adopted for television

broadcast systems" (Please see page 26, lines 24-30). ATVEF is such a standard. It is

especially important in view of Chen because ATVEF merges internet-features, which

Chen especially deals with (see Chen, page 27, lines 10-22), with broadcast television

(see Steinhorn, page 1, lines 1-17). Steinhorn further gives good reason why ATVEF is

a good choice as a broadcast standard- that is supported by some of "the biggest

names in the broadcasting, computer, and consumer electronics industries" (page 1,

lines 14-17). In view of the above comments, the examiner maintains that it would have

been obvious for one ordinarily skilled in the art to combine the ATVEF compliance of

Steinhorn with the system of Chen so that Chen's system could be more widely

distributed.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

As regards Claim 17, the claim language includes such limitations as to "execute

a web browser; utilize said web browser, in accordance with watermark data decoded

by said watermark decoder, to obtain auxiliary content; and render content for output

using said output device, said rendered content including both said content data received from the internet, and auxiliary content obtained through use of said watermark data." Nowhere in the applicant's specification is there a mention a web browser, browser, or a web application. At the most, the applicant mentions "clients" on line 4 of page 4 of the disclosure. This insufficient to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

As regards Claim 21, the claim language includes such limitations as "a portable apparatus, a wireless interface, a 2D optical scanner and the ability to receive emails and make phone calls." Nowhere in the applicant's specification is there a mention a web brower, browser, or a web application. At the most, the applicant mentions "clients" on line 4 of page 4 of the disclosure. This insufficient to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

To the extent that dependent claims 18-20 and 22-27 depend on independent claims 17 and 21, they, too, fail to comply with the written description requirement.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (WO 02/07425) in view of Steinhorn (1999).

As regards Claim 6, Chen discloses an interactive video consumer system wherein a watermark decoder for in-band watermarking of the video content (page 7, line 33, and page 8, lines 1-6) is included in said physical layer, or an intervening higher layer, but not so high as to be included in said application layer (IE demodulator, fig. 3.120A, specifically Information Extractor, fig. 3.290, decodes data signals broadcast with television signals received from the cable system, pages 37, lines 21-33 and page 38, lines 1-9. The embedding of data takes place at signal level, i.e. the physical layer). Chen, however, does not disclose a layered architecture comprising at least four layers, a lowest layer of the architecture being customized to particular hardware being used, and higher layers being progressively more independent of the hardware so as to offer hardware-independent interfaces for interacting with the system, the architecture including at least a physical layer, a network layer, and an application layer, such system enhancing video content through associated computer data. Steinhorn discloses a layered architecture comprising at least four layers, a lowest layer of the architecture being customized to particular hardware being used, and higher layers being progressively more independent of the hardware so as to offer hardware-independent interfaces for interacting with the system, the architecture including at least a physical layer, a network layer, and an application layer (such as the delivery protocol specification of ATVEF, page 3, lines 30-35 and page 4, lines 1-18, and layer figure,

page 3), such system enhancing video content through associated computer data (page 1, lines 23-26).

At the time of invention, it would have been obvious to one skilled in the art to add ATVEF compatibility as done in Steinhorn, an analogous art, to the interactive video system of Chen to make Chen's system compatible with a widely embraced industry standard.

As regards Claim 7, Chen discloses that said watermark decoder is provided in a link layer (IE demodulator, fig. 3.120A, specifically Information Extractor, fig. 3.290, decodes data signals broadcast with television signals received from the cable system, pages 37, lines 21-33 and page 38, lines 1-9. The embedding of data takes place at signal level, i.e. the physical layer).

As regards Claim 9, Steinhorn discloses a decoder for obtaining computer data transmitted with the video by multicast IP transmission (page 1, lines 11-13).

At the time of the invention, it would have been obvious to one skilled in the art to combine the multicast IP decoder of Steinhorn, an analogous art, with the interactive video system of Chen to allow Chen's system to advantage of another well-known method of receiving data.

As regards Claim 12, Chen discloses a system comprising a first and second consumer electronics apparatuses (figs. 1A.120A-N, page 32, lines 5-11), each of said apparatuses including an input for receiving content information (such as from a cable network, fig. 1A.132X), the first apparatus including a first watermark decoder for decoding plural-bit watermark data steganographically embedded "in band" within

content represented by the received content information, the first watermark decoder

being located in a particular logical layer of the layered architecture of said first

apparatus, and operative to relay decoded watermark data to a higher logical layer

within said architecture to control an aspect of first apparatus operation (IE

demodulator, fig. 3.120A, specifically Information Extractor, fig. 3.290, decodes data

signals broadcast with television signals received from the cable system, pages 37,

lines 21-33 and page 38, lines 1-9. The embedding of data takes place at signal level,

i.e. the physical layer); the second apparatus including a second watermark decoder for

decoding plural-bit watermark data steganographically embedded "in band" within

content represented by the received content information, the second watermark

decoder being located in a particular logical layer of a layered architecture of said

second apparatus (IE demodulator, fig. 3.120A, specifically Information Extractor, fig.

3.290, decodes data signals broadcast with television signals received from the cable

system, pages 37, lines 21-33 and page 38, lines 1-9. The embedding of data takes

place at signal level, i.e. the physical layer), and operative to relay decoded watermark

data to a higher logical layer within said architecture to control an aspect of second

apparatus operation (watermark data is then handed to a an end application, page 38,

lines 1-10); wherein said first and second watermark decoders are of different design

(Chen acknowledges that several different designs can be used for on the same

network, page 33, lines 5-13). Chen does not disclose that each of said apparatuses

implementing a layered architecture comprising at least four logical layers, the higher

layers being progressively more independent of the hardware so as to offer hardware

independent interfaces for interfacing with the apparatus and yet said differences are masked by the layered architectures within said consumer electronic apparatuses, so that said higher logical layers are independent of the design of the watermark decoders. Steinhorn does disclose that each of said apparatuses implementing a layered architecture comprising at least four logical layers, the higher layers being progressively more independent of the hardware so as to offer hardware independent interfaces for interfacing with the apparatus and yet said differences are masked by the layered architectures within said consumer electronic apparatuses, so that said higher logical layers are independent of the design of the watermark decoders (such as the delivery protocol specification of ATVEF, page 3, lines 30-35 and page 4, lines 1-18, and layer figure, page 3).

At the time of invention, it would have been obvious to one skilled in the art to add layered architecture as done in Steinhorn, an analogous art, to the interactive video system of Chen to make the applications with which the end user interacts less reliant on the underlying network architecture.

As regards Claim 13, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within audio content (page 22, lines 7-11).

As regards Claim 14, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within still image content (if the watermark can be embedded in video, it can be embedded in still image content, page 22, lines 7-11).

As regards Claim 15, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within video content (page 22, lines 7-11).

As regards Claim 16, Chen discloses that said higher logical layer in the first apparatus is responsive to said relayed watermark data to present additional content to a user of said first apparatus (such as a web application that allows a user to go "surf the web," page 38, lines 1-10).

As regards Claim 17, Chen discloses a consumer electronic apparatus, the apparatus being further characterized by: an input for receiving content data from the internet (such as from a cable network, fig. 1A.132X), and also including a memory and an output device (the system may include a Personal Computer, PC1 or PC2, 190A-1 or 190A-2, which contain memory and an output device such as a monitor, page 38, lines 1-2); a watermark decoder in said hardware layer, operative to decode plural-bit watermark data steganographically embedded "in band" within said received content data, and to provide the decoded watermark data to a higher layer in said architecture (IE demodulator, fig. 3.120A, specifically Information Extractor, fig. 3.290, decodes data signals broadcast with television signals received from the cable system, pages 37, lines 21-33 and page 38, lines 1-9. The embedding of data takes place at signal level, i.e. the physical layer); processing circuitry responsive to instructions stored in said memory, said processing circuitry thereby being operative to: execute a web browser; utilize said web browser, in accordance with watermark data decoded by said watermark decoder, to obtain auxiliary content; and render content for output using said

output device, said rendered content including both said content data received from the interact, and auxiliary content obtained through use of said watermark data (these are all functions commonly performed by a web-browser. Chen's system can handle a variety of data including HTML data, page 38, lines 1-10. Chens's system allows the user to make requests through the cable system, pages 16-17, lines 29-33 and 1-8). Chen does not disclose having a layered architecture including several logical layers, including a hardware layer and plural higher layers that are progressively more independent of hardware. Steinhorn discloses having a layered architecture including several logical layers, including a hardware layer and plural higher layers that are progressively more independent of hardware (such as the delivery protocol specification of ATVEF, page 3, lines 30-35 and page 4, lines 1-18, and layer figure, page 3).

At the time of invention, it would have been obvious to one skilled in the art to add layered architecture as done in Steinhorn, an analogous art, to the interactive video system of Chen to make the applications with which the end user interacts less reliant on the underlying network architecture.

As regards Claim 18, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within audio content (page 22, lines 7-11).

As regards Claim 19, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within still image content (if the watermark can be embedded in video, it can be embedded in still image content, page 22, lines 7-11).

As regards Claim 20, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within video content (page 22, lines 7-11).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lortz (US 6,349,410) in view of Chen (WO 02/07425) and in further view of Philyaw (US 6,970,914) and in further view of Hsu (US 6,295,058).

As regards Claim 21, Lortz discloses a portable apparatus (such as a web pad, fig. 3.80) having a processor (col. 7, lines 51-55), memory (col. 7, lines 66), a wireless interface (such as a bi-directional RF link, fig. 3.83 and col. 5, lines 45-55), one or more input devices (such as buttons or a touch screen, col. 5, lines 45-50), and one or more output devices including a display screen (fig. 3.82 and the television screen can also be used, fig. 3.22), and display received video data, the apparatus the apparatus further comprising software instructions in said memory causing said processor to define a layered stack of protocols, a lower layer of which is operative to communicate with said decoder and relay decoded plural-bit data to a higher layer, wherein said higher layer is operative to employ said decoded data in connection with an application selected by a user (Lortz receives additional content from the internet, which is a layered protocol. To interface with the internet, it is necessary for lLortz to take signals received at the physical layer and pass them up to the application layer so that they can be viewed or interacted with by the user, cols. 2 and 3, lines 45-67 and 1-45). Lortz does not disclose including a 2D optical sensor, that the apparatus operative to make phone calls, send

email, characterized by a watermark decoder operative to decode plural-bit watermark data steganographically embedded "in band" within digital content data processed by said apparatus. Chen discloses a water watermark decoder operative to decode plural-bit watermark data steganographically embedded "in band" within digital content data processed by said apparatus (IE demodulator, fig. 3.120A, specifically Information Extractor, fig. 3.290, decodes data signals broadcast with television signals received from the cable system, pages 37, lines 21-33 and page 38, lines 1-9. The embedding of data takes place at signal level, i.e. the physical layer) as well as an apparatus to make phone calls (page 38, lines 1-10).

At the time of the invention, it would have been obvious to one skilled in the art to combine the watermark decoding of Chen, an analogous art, to the apparatus of Lortz so that the additional data that Lortz requires does not take up additional bandwidth.

Lortz and Chen do not disclose a 2D optical sensor. Philyaw discloses a 2D optical sensor (fig. 12.1202, if an optical region can be sensed by the computer than there must be an optical scanner, col. 11, lines 25-42).

At the time of the invention, it would have been obvious to one skilled in the art to combine the optical scanner of Philyaw, an analogous art, to the apparatus of Lortz and Chen so that the additional data can be sensed and used to supply supplemental data.

Lortz, Chen, and Philyaw do not disclose sending email. Hsu discloses sending email (col. 3, lines 11-24).

At the time of the invention, it would have been obvious to one skilled in the art to combine the email functionality of Hsu, an analogous art, to the apparatus of Lortz,

Chen and Philyaw to provide the user with additional functionality common to the internet.

As regards Claim 22, Lortz discloses the apparatus of claim 21 wherein said higher layer is operative to render content to a user, the rendered content including the digital content from which the watermark was decoded, and auxiliary content obtained by reference to said decoded watermark data (Lortz receives URL information and displays the supplemental data via either the web pad display or television display, cols. 3 and 4, lines 28-67 and 1-17).

As regards Claim 23, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within audio content (page 22, lines 7-11).

As regards Claim 24, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within still image content (if the watermark can be embedded in video, it can be embedded in still image content, page 22, lines 7-11).

As regards Claim 25, Chen discloses that the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within video content (page 22, lines 7-11).

As regards Claim 26, Hsu disclose that the application comprises an email application (col. 3, lines 11-24).

As regards Claim 27, Chen discloses that said application comprises a phone application (page 38, lines 1-10).

At the time of the invention, it would have been obvious to combine the phone

application of Chen, an analogous art, with the apparatus of Lortz, Philyaw, and Hsu, so

that the user can place phone calls over the cable system.

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David R. O'Steen whose telephone number is 571-272-

7931. The examiner can normally be reached on 8:30 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller can be reached on 571-272-7353. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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DRO

ANDREW Y. KOENIG

PRIMARY PATENT EXAMINER